

Notice of Allowability

Application No.

10/699,857

Examiner

Vinit H. Patel

Applicant(s)

WANG, CHI S.

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 20 June 2005.
2. ☒ The allowed claim(s) is/are 1-4 and 6-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

VHP

DETAILED ACTION

Allowable Subject Matter

Claims 1-4 and 6-18 are allowed.

The following is an examiner's statement of reasons for allowance: Plasma reformers for the dissociation of hydrocarbon fuel and water are generally known in the art. Applicant's invention is a plasma reformer having a turbulent heating zone containing micro-porous articulated material with a ceramic wall, a reaction chamber having electrode means attached to the ceramic wall, an inner wall containing collector electrodes, and an electric circuit between the emitter electrodes and collector electrodes; an energy retaining zone; low thermal conductive materials surrounding the energy retaining zone; compression-expansion cushion mat surrounding the low thermal conductive material; an ion-neutralization filter surrounding the collector electrodes in the reaction chamber; a casing and ingress means into the turbulent zone and egress means from the energy retaining zone.

A search of the prior art revealed Wang, USP 5,614,156, Kieser et al., USP 5,746,051, Sakurai et al., USP 5,744,104 and Tuck et al., USP 6,097,139. However the prior art alone or in combination does not teach or suggest applicant's invention having a turbulent heating zone containing micro-porous articulated material with a ceramic wall, a reaction chamber having electrode means attached to the ceramic wall, an inner wall containing collector electrodes, and an electric circuit between the emitter electrodes and collector electrodes; an energy retaining zone; low thermal conductive materials surrounding the energy retaining zone; compression-expansion cushion mat

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surrounding the low thermal conductive material; an ion-neutralization filter surrounding the collector electrodes in the reaction chamber; a casing and ingress means into the turbulent zone and egress means from the energy retaining zone. Furthermore, Kieser et al., while teaching dielectric layers are utilized as insulating materials, does not disclose or suggest that a plasma reformer further comprise having an ion-neutralization filter surrounding the collector electrodes in the reaction chamber.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vinit H. Patel whose telephone number is (571) 272-0856. The examiner can normally be reached on 9:00 am - 5:00 pm.

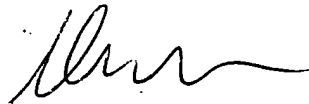
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



VHP



Glenn Caidarola
Supervisory Patent Examiner
Technology Center 1700